

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016954**Date Inspected:** 10-Sep-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Qiu Wen**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower & OBG Components**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials Quality Assurance Inspector, Sandeep Kumar (QA) was present during the times noted above for observations relative to the work being performed.

TOWER JETTY

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 24 located on East tower Lift-3, 99 M cross bracing gusset plate to small doubler plate ESD1 – FASA3 – 2C/E. Welder is identified as 046769. ZPMC Quality Control (QC) Inspector is identified Sun Zi Wang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3212 – B –U2a – 2.

Weld joint # 32 located on West tower Lift-3, 99 M cross bracing gusset plate to small doubler plate WSD1 – FASA3 – 2B/E. Welder is identified as 040610. ZPMC Quality Control (QC) Inspector is identified Sun Zi Wang. The welding variables recorded by QC appeared to comply with the WPS – B – P – 4313 – Tc –P4.

Weld joint # 25 located on East tower Lift-3, 99 M cross bracing gusset plate to small doubler plate ESD1 – FASA3 – 2B/E. Welder is identified as 046769. ZPMC Quality Control (QC) Inspector is identified Sun Zi Wang. The welding variables recorded by QC appeared to comply with the WPS – B – P – 4214 – Tc –U4c – 4.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

Weld joint # 22 located on South tower Lift-3, 109 M cross bracing gusset plate to small doubler plate SSD1 – FASA3 – 1B/E. Welder is identified as 052910. ZPMC Quality Control (QC) Inspector is identified Sun Zi Wang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3212 – B –U2a – 2.

BAY#10

ORTHOTROPIC BOX GIRDER (OBG) AT BAY#10

This QA Inspector observed the following work in progress

Fluxcored Arc Welding (FCAW):

Weld joint # 60 located on Bottom plate BP3090 – 001. Welder is identified as 057180. ZPMC Quality Control (QC) Inspector is identified as Li Jun. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Weld joint # 61 located on Bottom plate BP3090 – 001. Welder is identified as 052075. ZPMC Quality Control (QC) Inspector is identified as Li Jun. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Weld joint # 37 located on Bike Path BK004A7 – 028. Welder is identified as 053116. ZPMC Quality Control (QC) Inspector is identified as Ma Qian Li. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Weld joint # 43 located on Bike Path BK004A7 – 028. Welder is identified as 044473. ZPMC Quality Control (QC) Inspector is identified as Ma Qian Li. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

BAY#12

This QA Inspector observed the following work not in compliance:

Description of Incident:

During the Caltrans Quality Assurance (QA) in-process observations of the fabrication of Light Bracket, this QA Inspector discovered the following issues:

-ZPMC personnel performed welding on pipes of 6 Light Brackets using noncompliance combination of WPS's:- WPS-B-T-2132-2 (2F); WPS-B-T-2133 (3F) and WPS-B-T-2134 (4F).

-Fillet weld joining various diameter pipe and side plate of the light bracket.

-The above mentioned WPS's are qualified only for plates.

-The diameter of the pipes ranges from 114 mm to 406 mm.

-The affected members are identified as follows:

- 1) LB3A-001, welds#02, 03, 04, 05, 09, 10.
- 2) LB3A-002, welds#02, 03, 04, 05, 07, 08, 09, 10.
- 3) LB3A-003, welds#02, 03, 04, 05, 08, 10.
- 4) LB4A-001, welds#02, 03, 04, 05, 07, 08.
- 5) LB4A-002, welds#02, 03, 04, 05.
- 6) LB4A-003, welds#04, 05.

Applicable reference:

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

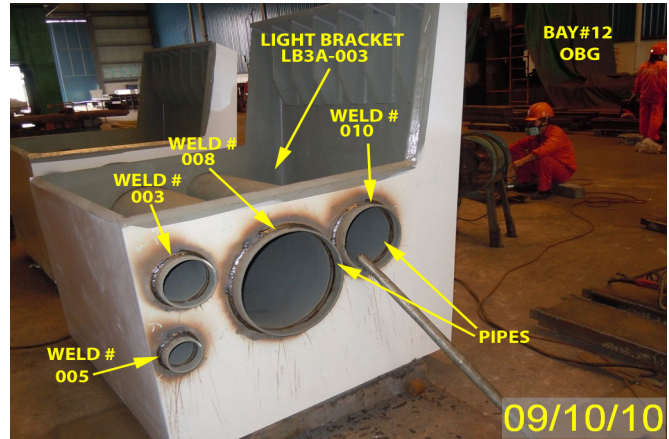
-AWS D1.1 Table 4.10 - Fillet Weld Option 3

-AWS D1.1 Figure 4.20 - Pipe Fillet Weld Soundness Test - WPS Qualification

-AWS D1.1 (4.11.2) – A fillet welded T-joint, as shown in Figure 4.19 for plate or Figure 4.20 for pipe (Detail A or Detail B), shall be made for each WPS and position to be used in construction.

For further information, please see the attached pictures below.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

No Relevant Conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Michael Ng - 15921845703, who represents the Office of Structural Materials for your project.

Inspected By: Kumar,Sandeep

Quality Assurance Inspector

Reviewed By: Clifford,William

QA Reviewer